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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/693,652	10/21/2000	Jerrell P. Hein	75622.P0019	7280
22503	7590	02/27/2008	EXAMINER	
DAVIS & ASSOCIATES			TRAN, QUOC DUC	
P.O. BOX 1093			ART UNIT	PAPER NUMBER
DРИPPING SPRINGS, TX 78620			2614	
		MAIL DATE	DELIVERY MODE	
		02/27/2008	PAPER	

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JERRELL P. HEIN and MARIUS GOLDENBERG

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Appeal 2007-3339  
Application 09/693,652  
Technology Center 2600

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Decided: February 27, 2008

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Before KENNETH W. HAIRSTON, JOSEPH L. DIXON, and  
JEAN R. HOMERE, *Administrative Patent Judges*.  
DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-16, 19, and 20. Claims 17 and 18 have been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

## BACKGROUND

Appellants' invention relates to a low voltage sensing and control of battery referenced transistors in subscriber loop applications. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A method comprising the steps of:

- a) providing subscriber loop pull-down circuitry operating in a first voltage domain, wherein the subscriber loop pull-down circuitry decreases at least one of a tip and a ring line current in response to a corresponding pull-down control signal; and
- b) providing control circuitry operating in a second voltage domain wherein the first and second voltage domains are substantially distinct, wherein the control circuitry varies the pull-down control signal in response to a sensed current corresponding to an associated one of a tip pull-down current and a ring pull-down current.

## PRIOR ART

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Embree	US 4,473,719	Sep. 25, 1984
Rosenbaum	US 5,323,461	Jun, 21, 1994

## REJECTIONS

Claims 1-6, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Rosenbaum.

Claims 7-16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenbaum in view of Embree.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and Appellants regarding the above-noted rejection, we make reference to the Examiner's Answer (mailed May 21, 2007) for the reasoning in support of the rejections, and to Appellants' Brief (filed Feb. 21, 2007) for the arguments thereagainst.

#### OPINION

In reaching our decision in this appeal, we have given careful consideration to Appellants' Specification and claims, to the applied prior art references, and to the respective positions articulated by Appellants and the Examiner. As a consequence of our review, we make the determinations that follow.

#### 35 U.S.C. § 102

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). Analysis of whether a claim is patentable over the prior art under 35 U.S.C. § 102 begins with a determination of the scope of the claim. We determine the scope of the claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). The properly interpreted claim must then be compared with the prior art.

“It is well settled that a prior art reference may anticipate when the claim limitations not expressly found in that reference are nonetheless inherent in it. Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates.” *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349 (Fed. Cir. 2002) (citations and internal quotation marks omitted). “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citations and internal quotation marks omitted).

“[A] prima facie case of anticipation [may be] based on inherency.” *In re King*, 801 F.2d 1324, 1327 (Fed. Cir. 1986). Once a prima facie case of anticipation has been established, the burden shifts to the Appellant to prove that the prior art product does not necessarily or inherently possess the characteristics of the claimed product. *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977) (“Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product.”). See also *In re Spada*, 911 F.2d 705, 708-09 (Fed. Cir. 1990).

The main issue in this case is whether Rosenbaum teaches subscriber loop pull-down circuitry operating in a first voltage domain, and control circuitry operating in a second voltage domain, wherein the first and second voltage domains are substantially distinct (Br. 6).

The Examiner maintains that Rosenbaum teaches a first voltage domain and a second voltage domain (BV=-48 volts and CV in the range of -170 volts to +180 volts) (Ans. 4 and 7-8). From our review of Appellants' Specification and the usage therein with respect to "voltage domains," and the ordinary and customary usage in the art, we find that the "voltage domain" of -48V is not substantially distinct from the voltage domain of -170V to +180V due to the complete inclusion of first voltage domain of -48V within the voltage domain of -170V to +180V. Therefore, we do not find that Rosenbaum teaches the invention as recited in independent claim 1. Additionally, the Examiner relies upon the well-known relationship  $V=IR$  (Voltage (V) = Current (I) multiplied by Resistance (R)). The Examiner further maintains that the relationship between voltage and current always remains regardless of whether resistance is constant or not (Ans. 8). While we agree with the Examiner's statement, we do not find that either the express teachings of Rosenbaum or the relationship of  $V=IR$  specifically addresses the limitation of two (substantially) distinct voltage domains.

Therefore, we find that the Examiner has not shown that Rosenbaum expressly or implicitly teaches the invention as recited in independent claim 1. Therefore, the Examiner has not met the initial burden of establishing anticipation by Rosenbaum, and we cannot sustain the rejection of independent claim 1 and dependent claims 2-5.

Similarly, we cannot sustain the rejection of independent claim 6 for the same reasons as discussed with respect to independent claim 1.

With respect to independent claim 19, Appellants argue that Rosenbaum is silent on the issue of integrated circuits, and Appellants argue that Rosenbaum does not teach or suggest a linefeed driver for control

signals and signal processor sensing a pull-down current of a selected one of a tip and a ring lines, as claimed, which do not reside on the same integrated package. With respect to separate integrated circuits, we agree with Appellants that Rosenbaum does not clearly address or teach how the disclosed circuits are embodied. Furthermore, we agree with Appellants that Rosenbaum in figure 1 is merely a representation of the digital circuitry in block form and does not specifically or expressly teach how those circuits are packaged. While we find the use of integrated circuit packages to be well known in the art, we cannot find that it would have been inherent that these circuits are necessarily within the same integrated circuit package or not in the same integrated circuit package. Therefore, we find that Rosenbaum does not anticipate independent claim 19, and we cannot sustain the rejection of independent claim 19 and dependent claim 20 based upon anticipation.

35 U.S.C. § 103

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). “[T]he Examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Furthermore, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness’ . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court

can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007)(quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

With respect to dependent claims 7-16, the Examiner has not identified how the teachings of Embree remedy the deficiency noted in independent claims 1 and 6 as discussed above. Therefore, we cannot sustain the rejection of dependent claims 7-16 under 35 U.S.C. § 103(a).

#### CONCLUSION

To summarize, we have reversed the rejection of claims 1-6, 19, and 20 under 35 U.S.C. § 102, and we have reversed the rejection of claims 7-16 under 35 U.S.C. § 103(a).

REVERSED

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DAVIS & ASSOCIATES  
P.O. BOX 1093  
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